INDIANA DEPARTMENT OF TRANSPORTATION
OFFICE OF MATERIALS MANAGEMENT

JAR SLAKE TEST
ITM No. 511-13T

1.0 SCOPE.

1.1 This test method covers the procedure for determining the durability of rock, such as shale or mudstone, when exposed to water.

1.2 This ITM may involve hazardous materials, operation, and equipment and may not address all of the safety problems associated with the use of the test method. The user of the ITM is responsible for establishing appropriate safety and health practices and determining the applicability of regularity limitations prior to use.

2.0 TERMNOLOGY. Definitions for terms and abbreviations shall be in accordance with the Department's Standard Specifications, Section 101.

3.0 SIGNIFICANCE AND USE. This ITM shall be used to measure the disintegration of rock materials due to exposure to water.

4.0 APPARATUS.

3.1 Drying oven, capable of maintaining a temperature of 230º ± 9 ºF

3.2 Beakers, at least 250 ml capacity

3.3 Porcelain dish or aluminum tare

3.4 Tongs

5.0 TEST SAMPLES.

5.1 Representative samples of the rock shall be obtained from drilled cores, excavation sites, quarries, and other available sources.

5.2 Rock samples shall be approximately 1 in. x 1.5 in. in size.

6.0 PROCEDURE.

6.1 Oven-dry the rock sample for at least 6 h and cool the sample to room temperature

6.2 Immerse the rock sample in a beaker of tap water such that the rock is covered by at least 1/2 in. of water

6.3 After the immersion, observe the specimen continuously for the first 10 minutes, followed by an additional 20 minutes of careful observation. Any reaction of the rock sample takes place primarily during this time period.

6.4 Make a final observation of the condition of the rock sample after 24 h

7.0 REPORT. Based on the visual observations, the Jar Slake Index (Ij) values are reported according to the following criteria:

JAR SLAKE INDEX, Ij	BEHAVIOR
1	Degrades to a pile of flakes or mud (complete breakdown)
2	Breaks down rapidly and/or forms many chips
3	Breaks down slowly and/or forms few chips
4	Breaks down rapidly and/or develops several fractures
5	Breaks down slowly and/or develops few fractures
6	No change